

## Mitigation Measures

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### Comments

E-0043/060, EM-0217/060, EM-0218/060, L-0056/060, LM-0017/060, LM-0018/060

Since DOE recognizes that area C may contain archeological sites, DOE should provide quantitative analysis of area C alternatives that present a lower risk of potential cultural resource impacts. DOE should also acknowledge that construction would be halted not simply until a professional evaluation was made, but until a non-biased professional evaluation was made that either determined that there would be no cultural resource impact or would provide a mitigation strategy satisfactory to all involved parties.

### Response

Area C is not in the National Monument (65 FR 37253). In consultation with the U.S. Fish and Wildlife Service and the Washington State Department of Fish and Wildlife, Area C was designated for "conservation mining" land use in the Hanford Comprehensive Land-Use Plan EIS (DOE 1999). Area C was selected to avoid damaging an essential wildlife corridor between the Hanford Site and the Yakima Training Center.

An expanded discussion of potential mitigation measures is in Volume I Section 5.18.

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### Comments

L-0061/004

Habitat restoration is not directly discussed in the list of potential mitigation measures. The FEIS [Final Environmental Impact Statement] should identify habitat restoration as a mitigation method when existing habitats are impacted by construction activities associated with the solid waste program or where contaminants adversely affect habitat quality.

### Response

Potential mitigation measures for addressing ecological impacts are described in Volume I Section 5.18.3, the Biological Resources Management Plan (BRMaP, DOE-RL 2001), and the Biological Resources Mitigation Strategy (BRMiS, DOE-RL 2003).

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### Comments

L-0041/017

Engineering design optimization must reflect the uncertainty in the contaminant inventory, waste form behavior, temporal variability, range of leaching behaviors, infiltration, and cap failure modes. Key redundancy features must be incorporated into the designs.

L-0041/052

DOE should ensure that engineering design optimization reflects the uncertainty in the contaminant inventory, waste form behavior, temporal variability, range of leaching behaviors, infiltration, and cap failure modes. For example, DOE should present a reasonable worst case scenario that indicates the amount of material that could be released in a year. If the design is effective, the modeled release should not adversely affect human health and the environment. DOE should not optimize the design to the extent that key redundancy features are not incorporated.

L-0041/055

Engineering design optimization must be reflective of the uncertainty in the contaminant inventory, waste form behavior, temporal variability, range of leaching behaviors, infiltration, and cap failure modes. DOE should not optimize the design to the extent that key redundancy features are not incorporated.

TSE-0031/011

The document does note that there is a lot of uncertainty about the cumulative impacts, but it does very little towards resolving those uncertainties.

## Mitigation Measures

### Response

An expanded discussion of uncertainties associated with the HSW EIS impact analyses is included in Volume I Section 3.5.

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of HICs for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated releases and levels of groundwater contamination. As set forth in Volume I Section 5.3, for the action alternatives, constituent concentrations in groundwater at 1 km from the disposal facilities are expected to be below the benchmark drinking water standards. Water quality in the Columbia River would be virtually indistinguishable from the current background levels.

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### Comments

TLG-0002/006

We will urge the U.S. Department of Energy to adopt a defense, in-depth system, which must include line disposal trenches, which Mike says they're favoring now; extensive environmental monitoring at the points; and performance criteria for the waste form, the capping system and the disposal sites.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of HICs for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated releases and levels of groundwater contamination. As set forth in Volume I Section 5.3, for the action alternatives, constituent concentrations in groundwater at 1 km from the disposal facilities are expected to be below the benchmark drinking water standards. Water quality in the Columbia River would be virtually indistinguishable from the current background levels.

Groundwater monitoring is conducted according to TPA requirements, the Hanford Dangerous Waste Management permit, and DOE Orders. Groundwater monitoring will be expanded as necessary according to agreements between DOE and regulatory agencies to support future waste management operations.

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### Comments

L-0041/026

Page 5.244, Line 7-9 implies that federal Drinking Water Standards don't apply to Hanford groundwater. However, Washington Administrative Code 173-340 requires groundwater be restored to the highest beneficial standards, which it defines as meeting drinking water standards. It further clarifies an aquifer is considered a drinking water source unless it meets a set of criteria which the Hanford aquifer does not.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of HICs for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated releases and levels of groundwater contamination. As set forth in Volume I Section 5.3, for the action alternatives, constituent concentrations in groundwater at 1 km from the disposal facilities are expected to be below the benchmark drinking water standards. Water quality in the Columbia River would be virtually indistinguishable from the current background levels.

## Mitigation Measures

Groundwater contamination beneath the Hanford Site is being studied and remediated by the ongoing CERCLA program in accordance with the Tri-Party Agreement. The CERCLA process considers legally applicable Federal, State, and local laws or relevant and appropriate requirements (ARARs). Any decisions reached by DOE on the basis of analysis in the HSW EIS would be implemented in accordance with applicable Federal, State, and local laws and regulations. See Volume II Appendix N, Section N.2.4.

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### Comments

F-0024/007

Use Washington State standards for groundwater protection. At this rate, DOE "standards" will soon be non-existent!

L-0032/002, LM-0005/002, LM-0006/002, LM-0007/002, LM-0008/002, LM-0009/002, LM-0010/002, LM-0011/002, LM-0012/002, LM-0013/002, LM-0014/002, LM-0015/002, LM-0016/002

We will not accept the federal government's blatant disregard for the desires and laws of Washington State!

L-0039/019

DOE fails to address either the specific EPA or MTCA carcinogen-risk standards for radionuclides, or the State and Federal anti-degradation standards, which are applicable to this analysis.

### Response

Several mitigation measures have been built into the alternatives addressed in the final IISW EIS, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of HICs for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated releases and levels of groundwater contamination. As set forth in Volume I Section 5.3, for the action alternatives, constituent concentrations in groundwater at 1 km from the disposal facilities are expected to be below the benchmark drinking water standards. Water quality in the Columbia River would be virtually indistinguishable from the current background levels.

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It should be noted that the long-term impact analyses presented in the EIS are based upon conservative assumptions including loss of institutional control, barrier (cap) failure, and no continuing maintenance. CERCLA and MTCA standards and other comparative benchmarks used in the EIS are based upon different assumptions such as continuing institutional control and maintenance of barriers. When these types of assumptions are applied to the disposal action evaluated in the HSW EIS the long-term impacts are substantially reduced. The HSW EIS has been revised in response to comments concerning the overly conservative nature of the EIS evaluations, to provide perspective on long-term performance when assumptions of continuing human ability to maintain barriers and controls are utilized. See for example, discussion of assumption of intact barriers, Volume I Section 5.3.5 and Volume II Appendix G Section G.4.

Volume I Section 6 identifies the major statutes, permits, compliance agreements, and regulatory requirements followed in conducting operations at Hanford Site. Statutes include AEA, CERCLA, RCRA and the State of Washington Hazardous Waste Management Act. Volume I Section 6.3 discusses the TPA. Volume I Section 6.4 discusses the Dangerous Waste Management permit. Volume I Section 6.19 provides a summary of existing and potential permits (including state approved permits where state decision-making will be necessary) required to construct and operate treatment, storage, and disposal facilities related to the HSW EIS alternatives. Volume I Section 6 has been updated and revised in response to comments in the final HSW

## Mitigation Measures

EIS.

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### Comments

E-0047/022

Mitigation measures for vadose zone and groundwater protection from the effects of long-term disposal impacts are not addressed.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of HICs for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated releases and levels of groundwater contamination. As set forth in Volume I Section 5.3, for the action alternatives, constituent concentrations in groundwater at 1 km from the disposal facilities are expected to be below the benchmark drinking water standards. Water quality in the Columbia River would be virtually indistinguishable from the current background levels.

An expanded discussion of potential mitigation measures is in Volume I Section 5.18.

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### Comments

TPO-0013/004

We have no adequate plan for prevention or mitigation of the risks involved, the ones of which we're already aware. And we will continue to discover, in the future, many additional risks of which we're not now aware.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of HICs for Cat 3 LLW and MLLW.

DOE does not and will not rely solely on long-term stewardship to protect people and the environment. As indicated in the DOE sponsored report "Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites" (National Research Council 2000), "contaminant reduction is preferred to contaminant isolation and the imposition of stewardship measures." Contaminant reduction is a large part of the ongoing cleanup efforts at Hanford. Most of the analyses in the HSW EIS are based on the assumption that long-term institutional controls would no longer be in effect 100 years after closure (about 2150 AD). Long-term groundwater impacts and subsequent human health impacts were determined based on the assumption that caps would degrade and eventually provide no protection (see Volume I Sections 5.3 and 5.11 and Volume II Appendices F and G). In addition, "intruder scenarios" are analyzed to determine the impacts of gaining access to the site (i.e., no institutional controls) and digging or drilling into waste sites. See Volume I Section 5.11.2.2 and Volume II Appendix F Section F.3. Further information on DOE's long-term stewardship activities can be found in the DOE Long-Term Stewardship Study (DOE 2001a). The discussions of long-term stewardship in Volume I Sections 2.2.7 and 5.18 of the HSW EIS have been revised in response to comments.

TPA Milestone M-15-00C requires all 200 Area, non-tank farm, pre-record of decision site investigation activities to be completed by December 31, 2008. Site characterization information generated from TPA remedial investigation and LLBG RCRA permitting activities has been used in development of the HSW EIS.

An expanded discussion of potential mitigation measures is in Volume I Section 5.18.

## Mitigation Measures

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### Comments

E-0043/037, EM-0217/037, EM-0218/037, L-0056/037, LM-0017/037, LM-0018/037

The HSW EIS lists some possible mitigation measures, but does not adequately analyze or consider them. Merely stating that "any mitigation plan(s), if necessary, would be prepared after the Record(s) of Decision is published" is not enough. DOE is presently able to quantitatively analyze the specific actions needed to redo or avoid potential environmental impacts for each of the alternatives, and should include this analysis within the HSW EIS analysis.

THR-0004/006

One of the things we do really want to recommend to the Department of Energy as they go through and finalize the EIS is that they go back and they look at themselves for some of the engineering accomplishments they have had in the past. One of the phrases that the Department of Energy use to use was a defense in depth. When you develop nuclear reactors, you develop redundant systems so you have defense in depth. We want to encourage them as they design landfills, as they design waste forms, and as they make performance specifications to their contractors, that they use a defense in depth concept. It's a way to help with the uncertainty that was talked about in the numerical models.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of HICs for Cat 3 LLW and MLLW.

An expanded discussion of potential mitigation measures is in Volume I Section 5.18.

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### Comments

E-0043/020, EM-0217/020, EM-0218/020, L-0056/020, LM-0017/020, LM-0018/020

All action alternatives are predicted to contaminate groundwater that flows to the Columbia River. Additional alternatives that do not contaminate groundwater that flows to the Columbia River should also be quantitatively analyzed, and strong mitigation measures reducing or contaminate groundwater that flows to the Columbia River should also be quantitatively analyzed, and strong mitigation measures reducing or stopping the contamination should be added to all the present action alternatives.

E-0043/056, EM-0217/056, EM-0218/056, L-0056/056, LM-0017/056, LM-0018/056

Analysis of the fact that the maximum containment [contaminant] levels are exceeded in all action alternatives or the cumulative impact of this upon existing contamination at Hanford [should be included in the cumulative impact analysis].

L-0062/004

We [Hanford Communities] share the concerns of the State of Washington regarding inadequate analysis of groundwater contamination and measures necessary to mitigate contamination in the groundwater. The conclusion that groundwater at Hanford is irretrievably and irreversibly committed due to long lived mobile radio nuclides is extremely troubling. We are concerned that in drawing this conclusion the Department of Energy will justify decisions to terminate efforts to capture and remove soil and groundwater contamination. Water in this region is a precious resource. We expect the Department of Energy to follow state and federal law and to continue to remove sources of contamination and mitigate contamination in the groundwater, both now and in the future, as new technologies become available.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS for future disposal of waste, including installation of barriers, liners, and leachate collection systems in disposal

## Mitigation Measures

facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of high integrity containers (HICs) for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated levels of groundwater contamination.

As set forth in Volume I Section 5.3, for the action alternatives, constituent concentrations in groundwater for previously disposed of waste and waste to be disposed of in the future are expected to be below the benchmark drinking water standards at 1-km from the disposal facilities. Water quality in the Columbia River would be virtually indistinguishable from the current background levels.

At disposal facility boundaries, benchmark drinking water standards would not be exceeded as a result of future disposal of waste. However, these standards could potentially be exceeded due to previously disposed of waste. Previously disposed of waste will be addressed by CERCLA or RCRA past-practice remedial action processes prior to closure of the LLBGs.

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### Comments

L-0044/119

Ecology does not support the USDOE's contention that levels of contamination in groundwater will be remain below 4 mrem for more than 12,000 years. The USDOE reported drinking water dose as committed effective dose equivalent, then compared it with the Drinking Water Standard for a 4 mrem per year committed dose equivalent limit promulgated by the USEPA for beta and gamma emitting radionuclides. The dose equivalent and effective dose equivalent differ by organ weighting factors; therefore, the comparison is invalid.

Ecology does not support the USDOE's contention that tank residuals will contribute less than 1 mrem to the drinking water dose 7,000 years onward.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS for future disposal of waste, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of high integrity containers (HICs) for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated levels of groundwater contamination.

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Drinking water doses reported in Volume I Section 5.11 are reported as CEDE for comparison with the DOE standard for dose to members of the public in DOE Order 5400.5 (DOE 1993). The 4 mrem/y DOE drinking water standard is intended to provide a level of protection comparable to the 4 mrem/y total body standard in 40 CFR 141. For a direct comparison to the 40 CFR 141 standards, groundwater concentrations are compared to the MCLs, as reported in Volume I Section 5.3 and Volume II Appendix G. That comparison is equivalent to calculating the total body CEDE or specific organ CDE, which is the basis for the MCLs.

The evaluations in the HSW EIS were prepared using accepted standard methodologies, such as "Federal Guidance Report 13 Cancer Risk Coefficients for Environmental Exposure." DOE and EPA use FRG-13 for radiological risk assessment. EPA also uses FRG-13 and related guidance for chemical exposure health

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impact analysis in its Integrated Risk Information System (IRIS). See Volume I Section 5.11 and the Volume II appendices for more discussion on methodologies used in the HSW EIS.

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### Comments

L-0049/002

The draft HSW EIS discusses mitigation measures in greater detail but proposes delaying adoption of these measures until reviews of performance measures following project implementation indicate the need to use them. In lieu of this approach, we strongly recommend that action alternatives incorporate these mitigation measures (which largely focus on treatment) as integral elements and factor the reduced impacts arising from use of these measures into the effects' analysis. We also believe that including prescriptive mitigation measures as part of action alternatives might be necessary to meet groundwater standards when groundwater impacts are evaluated at the correct point of compliance.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS for future disposal of waste, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of high integrity containers (HICs) for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated levels of groundwater contamination.

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The maximum point of impact from multiple and widely dispersed sources may not necessarily be directly underneath the Low Level Burial Grounds or at the Low Level Burial Ground boundary. To model the groundwater impacts from multiple and widely dispersed disposal units over long periods of time, a 1-km point of analysis location was deemed to be more appropriate and representative than a regulatory point of compliance well location, for purposes of NEPA analysis. The point of analysis approach is considered technically appropriate for a NEPA evaluation of groundwater impacts over the long-term (10,000 years) time period analyzed. The 1-km point of analysis is not intended to represent the proposed locations for actual monitoring wells that would be used during the operational and closure time period. Groundwater impacts at the facility boundary (about 100 meters) have been added to the impacts identified for the preferred alternative and are discussed qualitatively for the other alternatives. A discussion of the differences between the 1-km point of analysis and the disposal facility boundary is provided in Volume I Section 5.3 and Volume II Appendix G.

## Mitigation Measures

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### Comments

L-0049/001

U.S. EPA is pleased that the revised draft HSW EIS significantly addresses issues that we raised during our review of the earlier draft HSW EIS. The revised draft analyzes alternatives that we recommended, including the use of single, deep, lined trenches (i.e. megatrench), and provides more information on mitigation measures. While these changes have improved the quality of the EIS, we do have some environmental concerns due to the document's lack of information and analyses highlighting the differences in environmental effects among alternatives (including effects of mitigation measures) and ensuring compliance with applicable environmental standards. We have consequently rated the revised draft EIS, EC-2 (Environmental Concerns-Insufficient Information).

Specific information that should be contained in the final EIS includes:

- additional groundwater analyses reflecting a wider range of prediction that would complement existing analysis;
- more detailed analyses allowing the decision-maker and readers to understand the difference in environmental effects among alternatives.
- additional analysis of groundwater effects at the point of compliance, the facility boundary; and
- prescribed mitigation measures with the effects of such measures incorporated into the effects analysis.

We believe that the evaluating groundwater impacts at the correct point of compliance (i.e. facility boundary as required by 40 CFR 264.95) may compel inclusion of prescriptive mitigation measures as part of action alternatives to ensure that groundwater standards are met. In contrast, the revised draft HSW EIS discusses mitigation measures in a general way and states that the decision to implement these measures would be based on reviews of performance assessments. The final EIS should demonstrate that the agency-preferred alternative would comply with groundwater standards, as required by the Record of Decision for the Department of Energy's Waste Management Program: Treatment and Disposal of Low-Level Waste and Mixed Low-Level Waste (65 FR 10061).

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS for future disposal of waste, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of high integrity containers (HICs) for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated levels of groundwater contamination.

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An expanded discussion of potential mitigation measures is in Volume I Section 5.18.

DOE evaluates the performance of each disposal facility in detail to ensure the facility meets the DOE Performance Assessment requirements. If groundwater contamination in excess of applicable limits were predicted by the Performance Assessment process, changes in the waste acceptance criteria would be made to limit disposal of the waste causing the groundwater contamination. The waste would require further treatment prior to disposal or would be stored until a method was found to treat or dispose of the waste.

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### Comments

L-0044/113

It appears to us that USDOE is asserting that the groundwater under Hanford is irretrievable and irreversible committed due to long-lived mobile radionuclides in existing disposal areas. If this is DOE's assertion, it is not supported by data, and more importantly, such a claim is not a basis to avoid mitigation.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS for future disposal of waste, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of high integrity containers (HICs) for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated levels of groundwater contamination.

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The discussion of Irreversible and Irretrievable Commitments of Resources in Volume I Section 5.15 has been revised in this EIS.

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### Comments

L-0039/018

This draft EIS analysis shows all alternatives exceed regulatory limits. DOE uses as its benchmark in the HSW EIS the DOE 25 millirem all sources limit. This dose, however, is not the legally controlling standard for cleanup decisions or for permitting of mixed waste facilities. This dose is greater than the EPA's and State's required regulatory risk ranges.

L-0055/013

In addition, the levels that DOE sets for protecting human health are questionable. They use a level of 25 millirems, yet EPA's formal finding was that 25 millirem is not protective of human health and the environment as CERCLA cites. 15 millirems per year is the agreed upon exposure limit.

### Response

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS for future disposal of waste, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of high integrity containers (HICs) for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated levels of groundwater contamination.

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DOE and NRC regulated LLW disposal facilities are subject to the 25 mrem per year standard in DOE Order 435.1 (DOE 2001b) and 10 CFR 61, respectively. The Washington State Department of Health has adopted the NRC standard. EPA has not promulgated a 15 mrem per year standard.

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### Comments

E-0047/007

DOE's reliance on a 25 millirem dose standard is inconsistent with EPA's guidelines that recognize that this level of exposure is not protective of human health.

Question # 11- What is the maximum radioactive exposure that DOE assumes will be protective of human health and the environment?

Question # 12- Does DOE recognize that under State law (MTCA) contamination that is not protective of human health and the environment would be illegal and thus DOE must consider the level at which such an impact would occur? Please explain.

DOE is legally obligated to consider the MTCA and EPA carcinogen-risk standards for radionuclides and should revise the draft EIS with these standards as the applicable benchmark for considering effects.

### Response

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## Mitigation Measures

facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of high integrity containers (HICs) for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated levels of groundwater contamination.

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DOE and NRC regulated LLW disposal facilities are subject to the 25 mrem per year standard in DOE Order 435.1 (DOE 2001b) and 10 CFR 61, respectively. The Washington State Department of Health has adopted the NRC standard. EPA has not promulgated a 15 mrem per year standard.

DOE believes that it has considered the applicable legal requirements in evaluating the potential impacts of proposed action and its alternatives. See Volume I Section 6.

It should be noted that the long-term impact analyses presented in the EIS are based upon conservative assumptions including loss of institutional control, barrier (cap) failure, and no continuing maintenance. CERCLA and MTCA standards and other comparative benchmarks used in the EIS are based upon different assumptions such as continuing institutional control and maintenance of barriers. When these types of assumptions are applied to the disposal action evaluated in the HSW EIS the long-term impacts are substantially reduced. The HSW EIS has been revised in response to comments concerning the overly conservative nature of the EIS evaluations, to provide perspective on long-term performance when assumptions of continuing human ability to maintain barriers and controls are utilized. See for example, discussion of assumption of intact barriers, Volume I Section 5.3.5 and Volume II Appendix G Section G.4.